

2008 Surface Characterization

Location: Along the 2008 transect line, ~200m long running E-W
Located immediately adjacent to UAF Mass Balance Site
71.36568 N 156.54417 W

Collection: Tape measure is laid out along the 200 m transect line at the site, and surface conditions are visually characterized along the line with 1 m resolution.

Data Format:

Data files are comma separated text with a single header line naming the columns. Filename indicates the observation date. Column 1 is the start location of the feature. Column 2 is the end location of the feature. Column 3 is the abbreviation for feature type. Distances along the transect are measured from East to West, with 0 m at the East end and 200 m at the west end. A summary file provides the surface fraction covered by each type vs. date. Feature types are classified as:

RN “Broken Ice” – loose pieces of ice rubble not covered by snow.

HS “Heavy Snow” – Snow which appears optically thick, generally greater than 10 cm thick.

W “Moderate Snow” – Snow which is not optically thick but still appears rather white usually 5-10cm thick.

SN “Thin Snow” – Snow which is optically thin and appears gray.

BI “Bare Ice” – Ice which no longer has snow covering, but has a surface above pooling meltwater. Qualifiers differentiate into two categories if additional information was noted:

DBI “Drained Bare Ice” – Ice which no longer has snow covering, but has a surface above any ponding meltwater and a developed surface scattering layer of loose decaying ice crystals.

SBI “Slushy Bare Ice” – In general terms, ice which has predominantly wetted surface crystals, despite the fact that they protrude above the nominal water surface, due to water cohesion and capillary action. Specifically, any water saturated surface that has snow or ice crystals protruding above the surface of the water (in significant coverage... > 20%) but lacks sufficient topographic relief to drain a white surface scattering layer on at least 50% of the area.

SK “Melt Pond which has frozen over with a skim ice”

MP “Melt Pond” – Ice which is fully covered by a layer of liquid water.